

International School Challenge!



Little
Inventors
Ingenious Ideas

SUSTAINABLE DEVELOPMENT GOALS

14 LIFE BELOW WATER

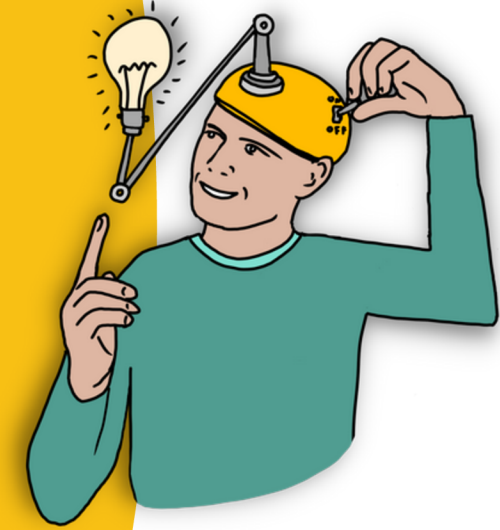


GUIDE

We are Little Inventors

Part of the Tomorrow Projects international creative education organisation - Little Inventors inspires imagination by taking children's amazing ideas seriously.

Our mission is to give children across the world the opportunity to develop and showcase their creativity and problem-solving skills, build their confidence, curiosity and resilience to become caring citizens of our planet; all invaluable attributes that will support them as adults in their everyday life and chosen career paths.



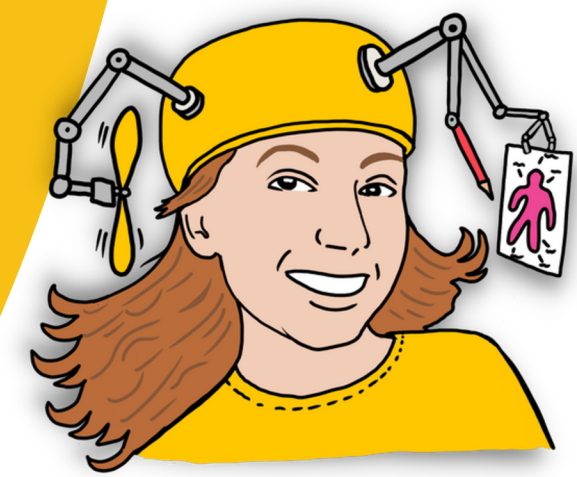
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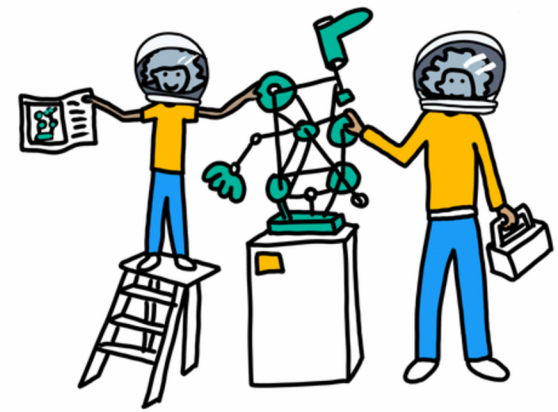


Lottie Smith
Workshop Facilitator

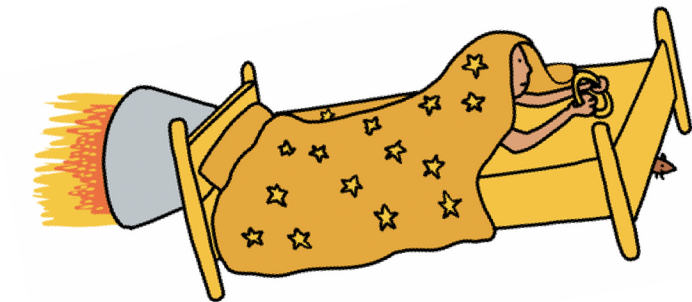
What do we want this challenge to achieve?



To support and increase the understanding of STEM and other creative skills in young people.



To encourage young people to start considering their own careers from an early age through creativity, exploration and innovation.



To support young people to develop their creativity and problem-solving skills, ability to work in teams, build their confidence, curiosity and resilience.



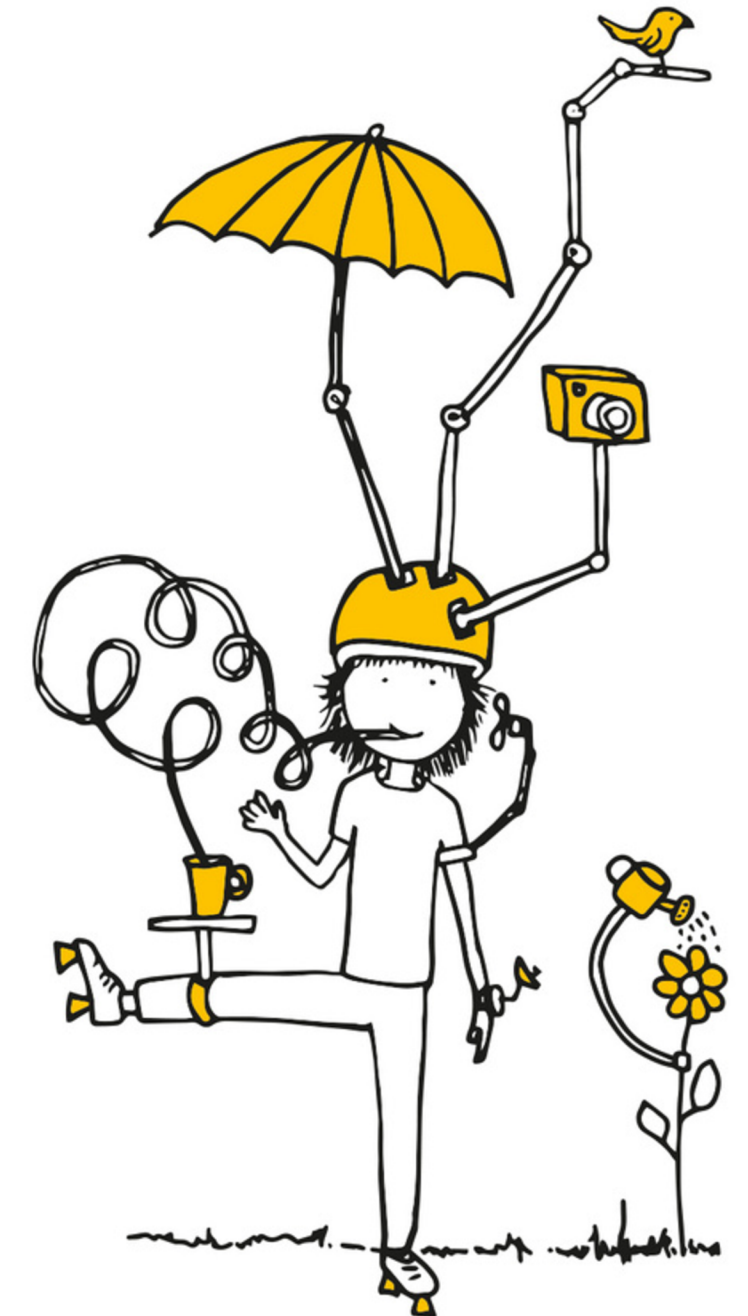
To increase awareness of the need for sustainable development and the goals set by the United Nations, and the power young people have to make a difference.

Challenge Background

The aim of Little Inventors challenges is to allow students to express the far reaches of their imagination through creativity. We want to inspire young people to think up and draw original, ingenious, funny, fantastical or perfectly practical invention ideas. There are no limits!

We want to encourage children to think about where they live and the local environment that is around them. They will be able to draw and submit their own inventions to appear on sustainable-development-goals.littleinventors.org where they will be reviewed by the Little Inventors team.

Their idea might be chosen as a Little Inventors team favorite, or even brought to life by one of our Magnificent Makers.

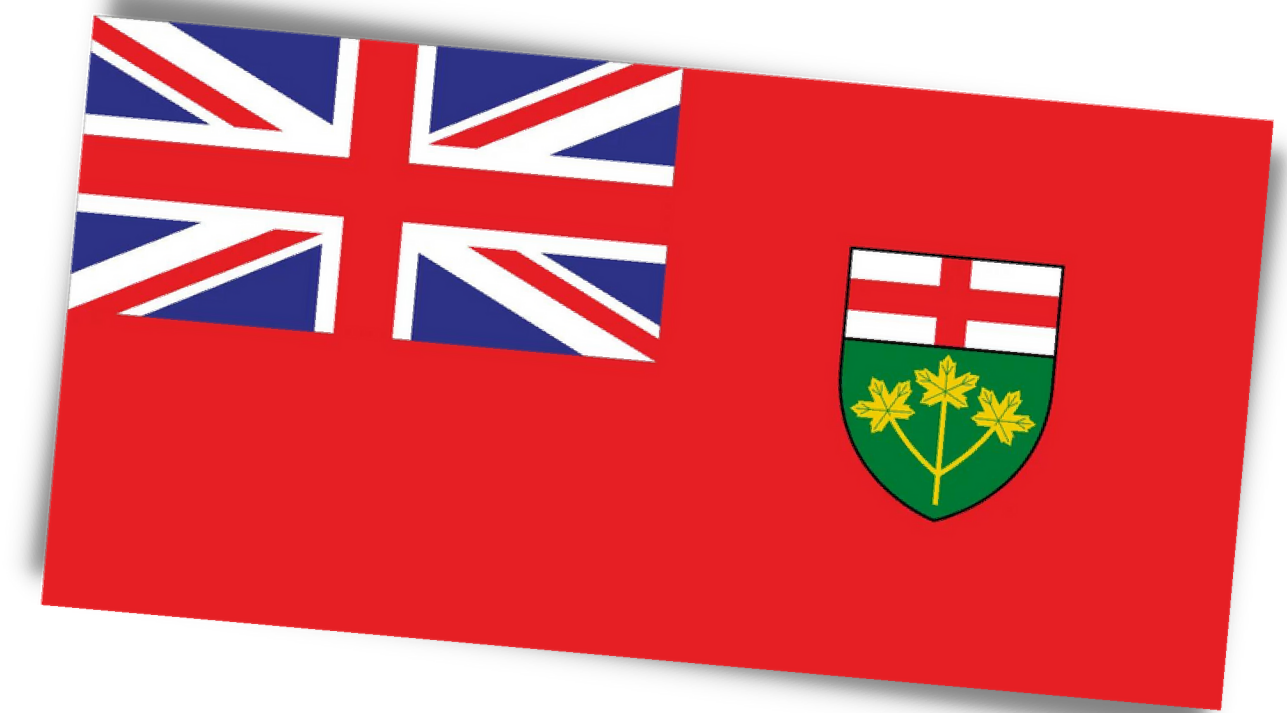
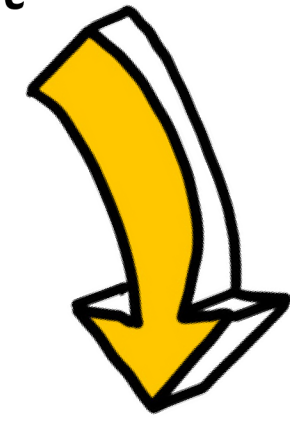


Ontario Curriculum Connections



Ontario embeds environmental education expectations in all grades and many subjects. These include understanding ecosystems, human impact on the environment, sustainability, and stewardship - all of which link directly to SDG 14 themes such as ocean health, pollution, and biodiversity.

This challenge is designed to align with the following curriculum expectations outlined in the latest Ontario Curriculum documents.



Grade 1

Science & Technology

Life Systems: Needs and Characteristics of Living Things

B1.1 – Assess the role of humans in maintaining a healthy environment

B2.1 – Identify basic needs of living things (including water and air)

B2.2 – Identify ways living things depend on their environment

A1.1–A1.3 – Asking questions, exploring, communicating findings

How this project aligns:

- Exploring sea animals as living things with basic needs
- Understanding clean water as essential for life
- Introducing responsibility for caring for animals and habitats

Social Studies

A1 – Application: Diversity and Inclusion

A1.1 – Describe ways people can care for the environment

How this project aligns:

- Building early ideas of caring for shared environments like oceans

Grade 2

Science & Technology

Life Systems: Growth and Changes in Animals

B1.1 – Assess how animals contribute to the environment

B1.2 – Identify actions humans can take to help animals survive

B2.2 – Describe animal habitats and adaptations

B2.6 – Describe ways animals respond to changes in their environment

A1.1–A1.6 – Inquiry and communication skills

How this project aligns:

- Studying marine animals and their habitats
- Exploring how pollution and human activity affect survival
- Inventing ideas to help animals live safely

Social Studies

A3 – Understanding Context: Global Communities

A3.2 – Identify environmental responsibilities people share globally

How this project aligns:

- Exploring oceans as shared global environments

Grade 3

Science & Technology

Life Systems: Growth and Changes in Plants

B1.1 – Assess ways plants are important to the environment

B2.1 – Describe how plants meet their basic needs

B2.4 – Identify factors affecting plant growth

B2.7 – Describe adaptations that help plants survive

A1.1–A1.6 – Scientific inquiry

How this project aligns:

- Learning about marine plants (phytoplankton, seaweed, kelp)
- Understanding oxygen production and food chains
- Linking plant health to ocean ecosystems

Social Studies

B1 – Application: Communities in Canada

B1.1 – Describe how the environment affects communities

How this project aligns:

- Studying coastal and ocean-connected communities

Grade 4

Science & Technology

Life Systems: Habitats and Communities

B1.1 – Assess positive and negative impacts of human activities on habitats

B1.2 – Analyse impacts of species loss

B2.1–B2.7 – Habitats, food chains, food webs, adaptations, limits

A1.1–A1.6 – Inquiry and engineering design

How this project aligns:

- Marine habitats, food webs and biodiversity
- Pollution, overfishing and climate impacts
- Inventing solutions to protect ocean communities

Social Studies

A3 – Understanding Context: Political and Physical Regions of Canada

A3.4 – Describe environmental impacts on regions

How this project aligns:

- Focussing on Canada's oceans and coastlines

Grade 5

Science & Technology

Earth and Space Systems: Conservation of Energy and Resources

E1.1 – Assess environmental and social impacts of resource use

E2.1 – Identify renewable and non-renewable resources

E2.4 – Describe how resource use affects the environment

E2.5 – Explain impacts of resource depletion

A1.1–A1.6 – STEM inquiry and design

How this project aligns:

- Looking at oceans as shared natural resources
- Studying overfishing, pollution and sustainability
- Designing ideas to reduce environmental harm

Social Studies

B1 – Application: Government and Citizenship

B1.2 – Describe actions citizens can take to address environmental issues

How this project aligns:

- Exploring stewardship and responsibility for oceans

Grade 6

Science & Technology

Life Systems: Biodiversity

B1.1 – Assess impacts of human activities on biodiversity

B1.2 – Evaluate ways of protecting biodiversity

B2.2 – Describe extinction and endangered species

B2.7 – Explain effects of climate change on biodiversity

A1.1–A1.6 – Inquiry and design

How this project aligns:

- Exploring marine biodiversity and endangered species
- Studying climate change and habitat loss
- Looking into inventions to protect ecosystems

Social Studies

B2 – Inquiry: Canada's Interactions with the Global Community

B2.4 – Analyse responses to global environmental issues

How this project aligns:

- Investigating oceans as global environmental issues
- Exploring Canada's role in global responses
- Comparing actions by governments, communities and scientists
- Proposing local actions with global impact

Grade 7

Science & Technology

Life Systems: Interactions in the Environment

B1.1 – Assess impacts of human activities on ecosystems

B1.2 – Analyse ways to reduce negative impacts

B2.2 – Describe interactions within food webs

B2.8 – Explain effects of harvesting and resource use

A1.1–A1.6 – Inquiry and problem-solving

How this project aligns:

- Studying overfishing, pollution and ecosystem balance
- Looking at sustainable resource use
- Applying systems-based invention thinking

Geography

B1 – Application: Physical Patterns in a Changing World

B1.3 – Analyse environmental challenges and responses

How this project aligns:

- Investigating major ocean challenges
- Analysing impacts of changing ocean systems
- Comparing human responses to environmental issues
- Designing and sharing sustainable solutions for life below water

Grade 8

Science & Technology

Earth and Space Systems: Water Systems

E1.1 – Assess impacts of human activity on water systems

E2.1 – Describe the global water cycle

E2.5 – Explain effects of climate change on water systems

A1.1–A1.6 – Scientific investigation

How this project aligns:

- Studying oceans as part of global water systems
- Looking into melting ice, warming seas and sea-level rise
- Exploring the protection of water quality and marine life

Geography

B1 – Application: Global Settlement and Sustainability

B1.4 – Analyse strategies for environmental sustainability

How this project aligns:

- Exploring key ocean challenges
- Analysing changes in ocean systems
- Evaluating human responses to environmental issues
- Designing sustainable solutions for life below water

Grade 9

Science & Technology

SNC1W – Biology: Sustainable Ecosystems

B1.1 – Assess impacts of climate change on ecosystems

B1.2 – Assess impacts on society and the environment

B1.3 – Describe sustainable practices

B2.1–B2.7 – Ecosystem interactions, cycling of matter and energy

A2.3–A2.5 – Scientific literacy and decision-making

How this project aligns:

- Exploring ocean ecosystems as complex systems
- Assessing evidence-based sustainability solutions
- Evaluating human responsibility

Grade 10

Science & Technology

SNC2D – Biology: Ecosystems and Human Activity

SB1.1 – Analyse effects of human activities on ecosystems

SB1.2 – Evaluate sustainability strategies

SB2.1–SB2.4 – Population dynamics and ecosystem stability

A1.1–A1.6 – Inquiry and communication

How this project aligns:

- Exploring long-term impacts on marine ecosystems
- Evaluating conservation strategies
- Designing and communicating solutions

Uploading your invention ideas

Visit the challenge website, click the yellow 'Upload' button and upload the idea drawing sheets one by one.



Make sure to take photographs or scans of the invention sheets that are clear and bright.

[Go to the website >](#)